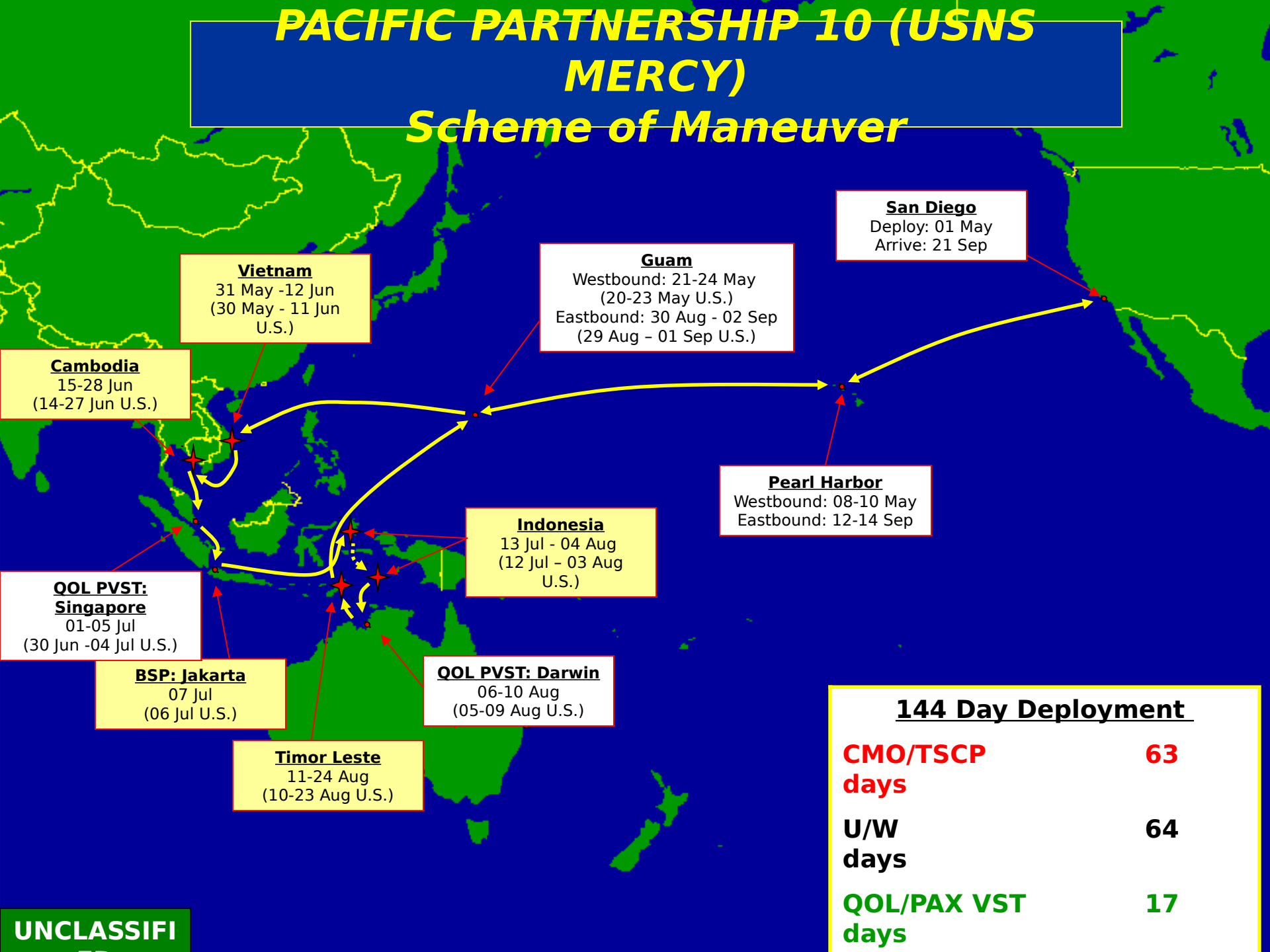
Health Affairs Fleet Surgeon

Pacific Partnership 2010
Force Health Protection

PACIFIC PARTNERSHIP 10 (USNS MERCY)
Scheme of Maneuver



144 Day Deployment

CMO/TSCP days	63
U/W days	64
QOL/PAX VST days	17

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Force Health Protection Level

- Green denotes Minimal Risk to Operational Forces.
  - **Minimal Risk is defined as no additional measures are required beyond deployment health requirements contained in USCINCPACINST 6200.2**

- Yellow denotes Moderate Risk to Operational Forces.
  - **Moderate Risk is defined as additional measures are required for deployment to the area. This may be additional immunizations or prophylaxis medications for diseases present in the area of operations.**

- Red denotes Significant Risk to Operational Forces.
  - **Significant Risk is defined as multiple immunizations or isolation techniques to ensure the safety of operational forces.**

FORCE HEALTH PROTECTION ASSESSMENT

FORCE HEALTH PROTECTION LEVEL

MINIMAL
MODERATE
SIGNIFICANT
N/A

Vietnam

Historical Diseases: Diarrheal Diseases, Malaria, Dengue, Japanese Encephalitis (JE) and Avian Influenza.
Recent Diseases: Dengue, Malaria, JE, Rabies, Influenza, Measles
Force Health Protection: Up-to-date in Immunizations, potentially anti-malarial protocols (specific areas), potential JE vaccine, use approved water and food sources.
Assessment: Moderate health risk to operational forces.

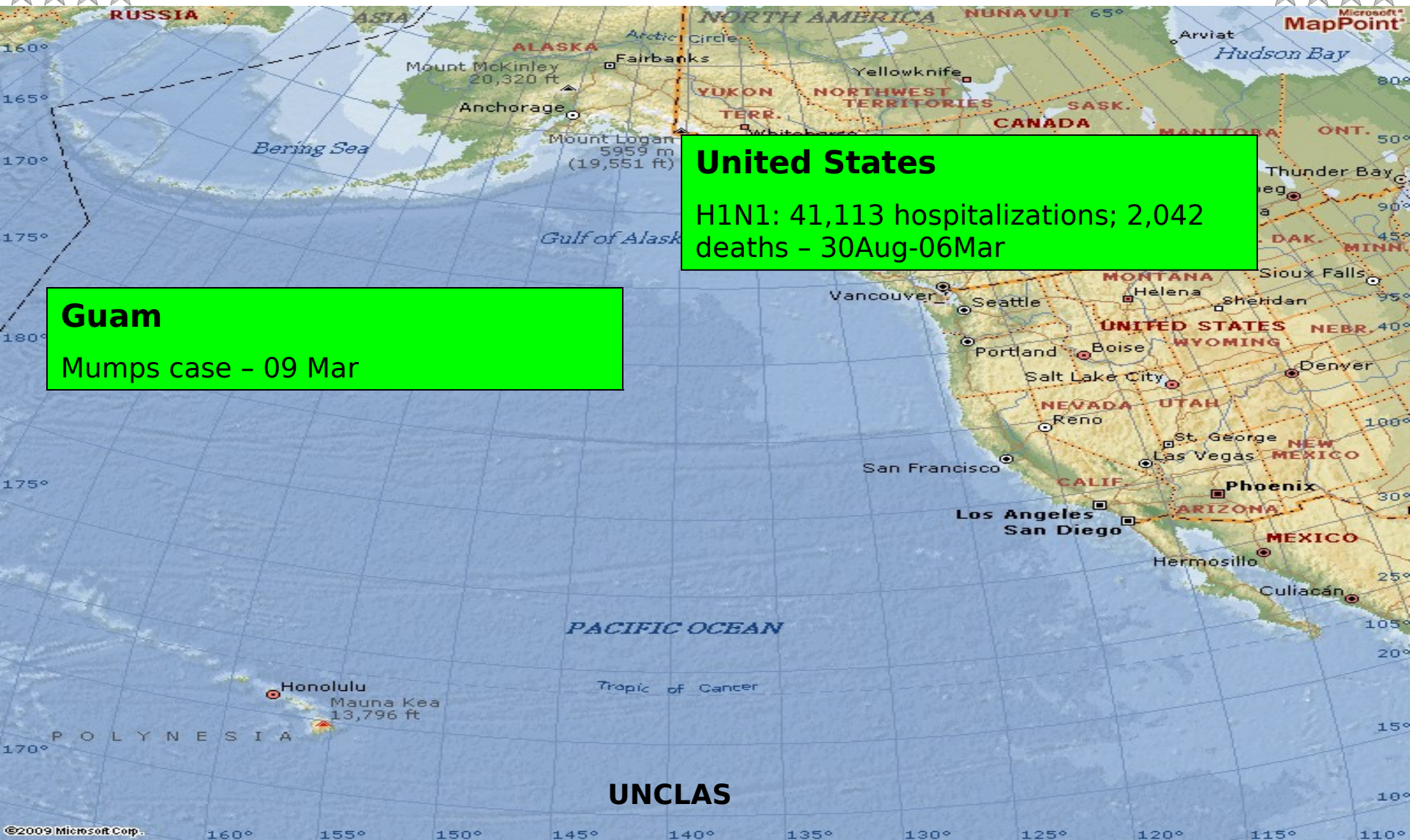
Reports

Agencies	Recent Disease Reports	FHP Requirements	Medical Infrastructure	Environmental Hazards	Overall Assessment
World Health Organization (WHO)	31 Jan 09	31 Jan 09		31 Jan 09	**09 Jul 09**
Center for Disease Control (CDC)	16 Dec 08	16 Dec 08			**09 Jul 09**
National Center for Medical Intelligence (NCMI)	09 Jul 09	09Jul 09	09 Jul 09	**09 Jul 09**	**09 Jul 09**
TRAVAX	31 Jan 09	31 Jan 09	31 Jan 09		**09 Jul 09**
US Army Center for Health Promotion and Preventive Medicine (USACHPPM)	**01 Apr 09**	**01 Apr 09**	**01 Apr 09**	**01 Apr 09**	09 Jul 09
CIA World Factbook					
Health Maps	18 mar 09			**18 Mar 09**	**09 Jul 09**

For emergent care within the AOR: TRICARE; ISOS

Eastern Pacific

Week of 15 Mar 2010



United States

H1N1: 41,113 hospitalizations; 2,042 deaths – 30Aug-06Mar

Guam

Mumps case – 09 Mar

South East Asia

Week of 15 Mar 2010

Regional –

H1N1 – highest rates worldwide

Cambodia –

6 Cholera cases linked to Viet Nam – 04 Feb

Singapore –

8 human Dengue cases in urban center – 03 Feb

Papua New Guinea –

Cholera outbreak – 2000 cases; 45

Viet Nam –

7 Cholera cases Mekong Delta – 02 Feb

232 Hand-Foot-Mouth-Disease cases in cattle – 31 Jan

Avian flu kills 10,000 birds – central VietNam – 03 Mar

Indonesia –

Dengue Fever 2200 cases in 2010 – Jakarta 07 Mar

Avian Flu kills 5,500 chickens in Java; Human case in S. Jakarta – 31 Jan

Chikunguna – Bekasi (Jakarta) – 10 Mar

Rabies – Bali 13 Mar

Timor Leste –

Nothing to report

Vietnam

Historical Diseases: Japanese Encephalitis (JE), Rabies, Malaria (*P. falciparum),* Diarrheal Diseases, Dengue Fever, Avian Influenza H5N1.

Recent Diseases: Travelers Diarrhea, JE, Malaria, and Dengue Fever.

Force Health Protection Requirements: Up-to-date immunizations, anti-malarial protocols for Vietnam (chemoprophylaxis is not indicated with current CONOPS), JE vaccination (not indicated for Qui Nhon coastal areas), day time insect precautions, Pre/Post Deployment PPD, and use approved water and food sources.

Medical infrastructure: Medical care inadequate, is not up to standards of industrialized nations. Utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Contamination of food and water sources. Poor air quality, ensure personnel with respiratory illnesses such as asthma and allergies have adequate supply of medications. Avoid non-domestic animals.

Assessment: Moderate health risk to operational forces. Updated 2 Mar 10

Cambodia

Historical Diseases: Japanese Encephalitis (JE), Malaria (*P. falciparum),* Diarrheal Diseases, Dengue, Typhoid Fever, Avian Influenza H5N1.

Recent Diseases: Travelers Diarrhea (bacterial and protozoal), Japanese Encephalitis (JE), Malaria (mefloquine resistance), Dengue and Measles.

Force Health Protection Requirements: Up-to-date immunizations, anti-malarial protocols, JE vaccination required for RON personnel, day and night time insect precautions, Pre/Post Deployment PPD, and use approved water and food sources.

Medical infrastructure: Medical care inadequate, not up to standards of industrialized nations. Utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Contamination of food and water sources throughout the country.

Assessment: Moderate health risk to operational forces.

Updated 2 Mar 10

8

Indonesia

Historical Diseases: Diarrheal diseases, Typhoid, Hepatitis A, Malaria, Dengue, Chikungunya, Japanese Encephalitis (JE), and Rabies.

Recent Disease Reports: Travelers Diarrhea**,** Avian Influenza (non-human to human), HIV, Malaria (*P. falciparum* 60% / *vivax* 40%), Japanese Encephalitis and Dengue.

Force Health Protection Requirements: Up-to-date in Immunizations, anti-malarial protocols, JE vaccination required for RON personnel, day and night time insect precautions, Pre/Post Deployment PPD and use approved water and food sources.

Medical infrastructure: Medical care inadequate, not up to standards of industrialized nations. Utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Contamination of food and water sources. Avoid local seafood (grouper, snapper, amberjack, and barracuda); ciguatera toxin remains even when fish is well cooked.

2 Mar 2010

Assessment: Moderate health risk to operational forces.

Timor-Leste

Historical Diseases: Diarrheal Diseases, Typhoid, Hepatitis A, Malaria, Dengue, Rabies and TB.

Recent Diseases: Malaria, Dengue, Japanese Encephalitis and TB.

Force Health Protection Requirements: Up-to-date in Immunizations, anti-malarial protocols, JE vaccination required for RON personnel, day and night time insect precautions, Pre/Post Deployment PPD and use approved water and food sources.

Medical Infrastructure: Medical care inadequate, not up to standards of industrialized nations. Utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Contamination of food and water sources and animals (Rabies threat).

Assessment: Moderate health risk to operational forces.

Updated 2 Mar 2010

Palau

Historical Diseases present in area: Diarrheal Diseases, Dengue, ZIka, Ciguatera poisoning, TB.

Recent Diseases: Travelers Diarrhea, Dengue, and Ciguatera poisoning.

Force Health Protection Requirements: Up-to-date in Immunizations, Pre/Post PPD for 30 day stay and day time insect precautions.

Medical infrastructure: Hospitals are adequate. For severe illness or injuries utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Avoid local seafood (grouper, snapper, amberjack, and barracuda); ciguatera toxin remains even when fish is well cooked.

Assessment: Mild health risk to operational forces.

Papua New Guinea

Historical ngue, Ciguatera Poisoning, Rabies and Hep A & B.

Recent Diseases: Travelers Diarrhea**,** Cholera, Typhoid, HIV, Malaria, TB, Rabies and Dengue.

Force Health Protection Requirements: Up-to-date in Immunizations, anti-malarial protocols, JE vaccination required for RON personnel, day and night time insect precautions and use approved water and food sources. Of note; considered rabies free.

Medical infrastructure: Medical care in major cities adequate. For severe illness or injuries utilize C7F Annex "Q" or contact International SOS for medical care.

Environmental Hazards: Contamination of food and water sources. Poor air quality, ensure personnel with respiratory illnesses such as asthma and allergies have adequate supply of medications..

Assessment: Moderate health risk to operational forces. 1 Mar 2010

Health Risks

- Infectious Diseases
- Heat stress
- Dehydration
- Sunburn
- Injury
- Motion sickness
- Security/Safety

Infectious Disease Risks

- **Vaccine-Preventable Diseases**:
  - 2009 H1N1 & Seasonal Influenza, Hepatitis A & B*, Typhoid, Japanese Encephalitis, Rabies
- **Malaria, Dengue Fever, Traveler's Diarrhea, Tuberculosis**
- **Others**:
  - HIV*, Leptospirosis, Schistosomiasis, Rickettsial Diseases, Arboviruses, H5N1 Avian Influenza

* Health Care Workers

Required Health Measures

- Immunizations
- Malaria chemoprophylaxis
  - Terminal chemoprophylaxis*
- Mosquito & insect bite prevention
- Pre-mission health assessment
  - Include TB screening test
- Obtain personal medication for treated health conditions from primary provider

*Depends on itinerary – obtain specific guidance

Required Immunizations

- Start vaccinations early to accommodate vaccines that require several doses within a series

- Routine:
  - Tetanus/diphtheria
  - Measles (MMR)
  - Polio
  - Varicella (chicken pox)

- Mission-specific:
  - Hepatitis A
  - Hepatitis B*
  - Typhoid
  - H1N1 Influenza
  - Seasonal Influenza
  - Japanese Encephalitis**
  - Rabies**

* Required for health care providers

** For high risk groups only – obtain specific guidance

PP10 Guidance

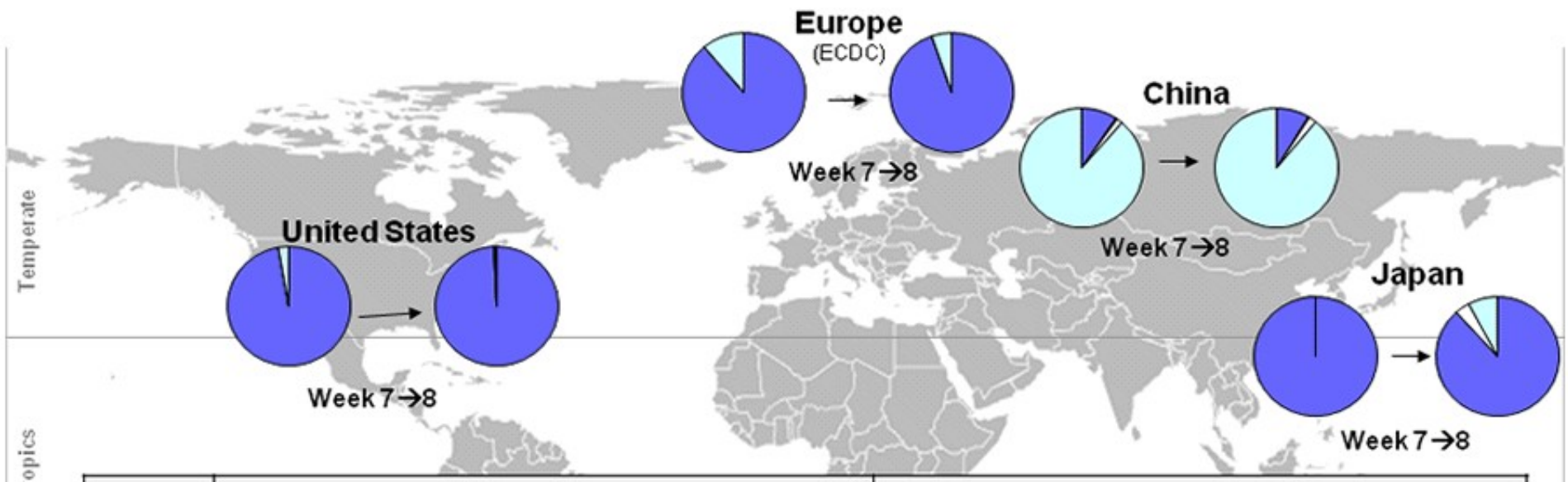
- **Malaria Chemoprophylaxis**
  - Required for Cambodia, Indonesia, Timor Leste, and Papua New Guinea.
  - Terminal Prophylaxis upon leaving endemic countries for final voyage home.
  - Documented Mefloquine resistance in Cambodia mission areas.
- **Japanese Encephalitis Vaccine**
  - Required for RON personnel in Cambodia, Timor-Leste and Indonesia.
  - Consider for personnel that will accumulate 30 days of boots on ground time over course of visits to named countries.
- **Rabies**
  - All Vets, Vet Techs and any personnel assisting in handling animals require vaccination.
  - Ensure adequate post exposure immune globulin & vaccination on USNS Mercy.

Human Influenza Viruses

- Seasonal & 2009 H1N1 influenza viruses
- Risk year-around in mission locations
- Risk greater in shipboard environment
- Spread by cough, sneeze & direct contact
- Seasonal & H1N1 vaccinations effective
- H1N1 virus susceptible to Oseltamivir (Tamiflu)

Proportion of Influenza Subtypes in Select Countries

Week 8: Feb 21/22 – Feb 27/28



	Week 7 Feb 14/15 - Feb 20/21					Week 8 Feb 21/22 - Feb 27/28				
	2009 H1N1	Influenza A (H1)	Influenza A (H3)	Influenza B (total)	Total	2009 H1N1	Influenza A (H1)	Influenza A (H3)	Influenza B (total)	Total
United States	210 (97.2%)	0	0	6 (2.8%)	216	240 (99.2%)	0	1 (0.4%)	1 (0.4%)	242
Europe	16 (88.9%)	0	0	2 (11.1%)	18	18 (94.7%)	0	0	1 (5.3%)	19
China	71 (9.3%)	3 (0.4%)	12 (1.6%)	677 (88.7%)	763	97 (8.6%)	4 (0.4%)	23 (2.0%)	1009 (89.1%)	1,133
Japan	151 (100%)	0	0	0	151	68 (88.3%)	0	3 (3.9%)	6 (7.8%)	77

Data Sources:
Canada: FluWatch (http://www.phac-aspc.gc.ca/fluwatch/index-eng.php)
China and Japan: FluNet (http://gamapserver.who.int/GlobalAtlas/home.asp)
Europe: ECDC (http://www.ecdc.europa.eu/en/Pages/home.aspx)
United States: CDC

Influenza Control Strategies

- Vaccinate all mission participants with seasonal and 2009 H1N1 vaccines
- Enforce respiratory hygiene and cough etiquette
- Enhance hand hygiene compliance
- Establish USNS Mercy access control measures and triage procedures
- Manage visitor access and movement within the USNS Mercy
- Control patient placement and transport
- Apply isolation precautions for ill mission participants

-Note: Influenza infection control strategies per the Center for Disease Control and Prevention (CDC)

H5N1 – Avian Influenza

- Low risk in humans
- Human cases reported in Viet Nam, Cambodia, Indonesia & Timor Leste
  - High human death rate when infected
  - Exceptionally rare human-to-human spread
- Virus excreted in bird droppings & by direct contact with birds
- Avoid live animal markets and poultry farms
- Current influenza vaccines not effective
- Virus susceptible to Oseltamivir (Tamiflu)

Vector-Borne Infections

- Malaria
- Dengue Fever
- Japanese Encephalitis
- Rickettsial Diseases
- Arboviruses
- Yellow Fever – vaccination certification for some Partner Nations

Malaria

- Risk in Viet Nam, Cambodia, Indonesia, Timor Leste, & Papua New Guine
- Spread by mosquito bite
- Risk year-around
- Predominantly *P. falciparum* & *vivax*
- Chemoprophylaxis* and Personal Protective Equipment required
- Terminal chemoprophylaxis required for mission participation > 30 days**
  - G6PD status must be known

* Chemoprophylaxis susceptibility and resistance varies by location (see additional guidance)

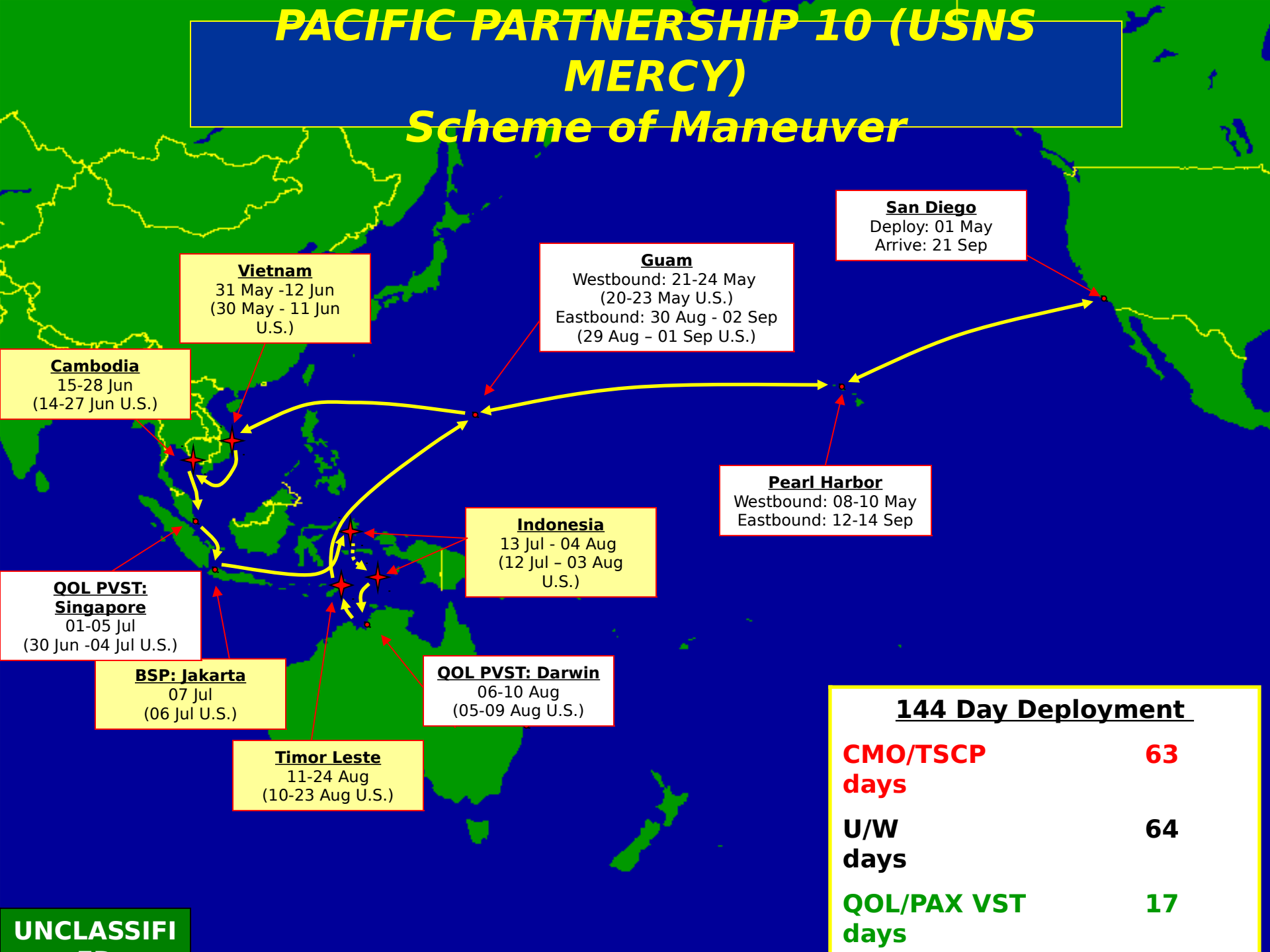
** Depends on itinerary – Consider specific guidance for PNs, NGOs, USPHS and short-term participants

Malaria Chemoprophylaxis

- Required in Cambodia, Indonesia, Timor Leste, & Papua New Guinea
- Continue through Quality-of-Life port visits
- Universal Chloroquine resistance
- Approved medications:
  - Doxycycline 100mg once each day
  - Mefloquine* 250mg once each week
  - Malarone (250/100mg) once each day
- Terminal chemoprophylaxis
  - Primaquine 30mg once each day

* Documented Mefloquine resistance in certain provinces of Viet Nam & Cambodia

PACIFIC PARTNERSHIP 10 (USNS MERCY)
Scheme of Maneuver



144 Day Deployment

CMO/TSCP days	63
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QOL/PAX VST days	17

UNCLASSIFI

Mefloquine Resistance

- Do not use Mefloquine in these provinces
- Viet Nam: central/southern provinces
  - Kon Tum, Gia Lai, Dac Lak Khanh Hoa, Minh Thuan, Binh Thuan, Lam Dong, Binh Phuoc, Tay Ninh, Dong Nai, Binh Duong
- Cambodia:
  - Otdar Mean Cheay, Banteay Mean Cheay, Siem Reab (Angkor Wat), Preah Vihear, Batdambang, Pouthisat, Kaoh Kong, Kampong Spoe

Dengue Fever

- Risk in entire South East Asian region
- Spread by mosquito bite (daytime bite)
  - Personal Protective E
  - able

Japanese Encephalitis

- Risk in Viet Nam, Cambodia, Indonesia, Timor Leste, & Papua New Guinea
  - Risk greatest in rural areas and when remaining overnight (RON)
  - Transmission risk peaks during mission
- Spread by mosquito bite
- Personal Protective Equipment required
- Vaccination required for RON personnel in Cambodia, Indonesia, & Timor Leste

Rickettsial Diseases

- Scrub & murine typhus
- Low overall risk
  - Higher in personnel remaining overnight
- Risk in Viet Nam & Cambodia
- Spread by mite & flea bites
- Avoid moist, rural areas with rodents
- Personal Protective Equipment required

Arboviruses

- Ross River, Murray Valley, and Barmah Forest
- Reported infections in Australia
- Overall risk low
- Spread by mosquito bite
- Insect precautions during Quality-of-Life visit recommended

Yellow Fever

- No risk
- No vaccine required for itinerary
- Proof of vaccination certificate required for country entry if travel originating in Yellow Fever endemic areas
  - May effect Partner Nations: e.g. Peru

Mosquito & Insect Bite Prevention

INSECT REPELLENTS FOR SKIN AND CLOTHING

DEET lotion

NSN 6840-01-284-3982

- Apply a thin coat to EXPOSED skin
- One application lasts up to 12 hours

Permethrin

- Individual Dynamic Absorption Kit (IDA)
- Treatment lasts for for over 50 launderings

NSN 6840-01-345-0237

NSN 6840-01-278-1336

- Aerosol spray can
- Treatment lasts through 5-6 washes

PERSONAL PROTECTIVE MEASURES

Permethrin On Uniform + DEET On Exposed Skin + Properly Worn Uniform = MAXIMUM PROTECTION

DOD Insect Repellent System

YOU NEED TO KNOW…
Dry cleaning removes permethrin from the uniform

Bed Nets

- Recommended for personnel remaining overnight – e.g. engineers, medical outreach
  - Permethrin treated nets are best

Traveler's Diarrhea

- Risk in entire South East Asian region
  - Lowest in Singapore & Darwin Australia
- Caused by contaminated food & water
- Avoid local water & street vendors; no raw or undercooked food; peel all fruits/veggies; wash hands with soap prior to eating
- Use only approved sources

Tuberculosis (TB)

- Very common in South East Asia
  - Highest WHO risk category for TB
- Greater risk to health care providers
- Spread by airborne droplets when humans cough or sneeze
- Avoid congregate social settings
- Pre- & Post-mission TB skin test required
  - Post-mission TB test 10-12 weeks after return
- Patient screening algorithm aboard USNS Mercy

Fresh Water Infections

- Leptospirosis & Schistosomiasis
- Overall risk low
- Risk in Viet Nam, Cambodia & Indonesia
  - Mekong River tributaries of Viet Nam & Cambodia
  - Napu & Lindu valleys of Sulawesi Island in Indonesia
- Transmitted in fresh water by bacteria or larvae through skin & mucus membranes
- Avoid swimming or wading in fresh water

Ciguatera Toxin Poison

- Toxin in reef fish like grouper, snapper, amberjack, parrot fish, and barracuda
- Very common in Guam, Australia, Palau, & Papua New Guinea
- Toxin remains even with good cooking
- Avoidance is key

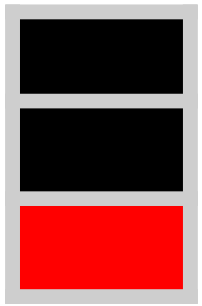
Rabies

Local Animals

- Many countries have NO rabies control programs!
- Do not feed or attempt to touch animals*
- Report animal bites & scratches immediately
- Have rabies immune globulin and vaccine on USNS Mercy for post-exposure prophylaxis

* Veterinarian participants must obtain immunization and personal protective equipment

Heat Index Assessment

		Flag Color	WBGT Index
Viet Nam/Cambodia/Sing.			**90 degrees and above**
Indonesia/Timor Leste			**88-89.9 degrees**
Guam/Australia			**85– 87.9 degrees**
			80– 84.9 degrees

Signs And Symptoms

- **Heat Cramps:** Painful muscle cramps, excessive sweating.
- **Heat Exhaustion:** Cramps, sweating, dizziness, headaches, and mental confusion.
- **Heat Stroke:** Cramps, sweating, dizziness, headaches, mental confusion, increased pulse, seizure, and coma.

Reporting Requirement

Medical Event Report as per BUMEDINST 6220.12A

Preventive Measures

- Limit alcohol intake
- Limit dietary supplements
- Minimal outdoor physical exercise/increase rest periods
- Increase fluids intake (Caution: water intoxication)

First Aid

- Move victim to cool, shaded area
- Loosen clothing
- Small, slow sips of water/sports drinks
- Contact Medical

Points of Contact

- **International SOS/TRICARE Operations Coordinator**
  - Tel: 65-6338-9277 (Singapore)
  - Email: sin.tricare@internationalsos.com
- **TIRCARE Area Office – Pacific**
  - COMM 011-81-611-743-2054
  - Email: james.marron@med.navy.mil
- **United States Naval Forces 7th Fleet Surgeon**
  - COMM: 81-6160-43-9041
  - DSN: 315-243-9041

International SOS

- **Quotes are easily obtainable at:**

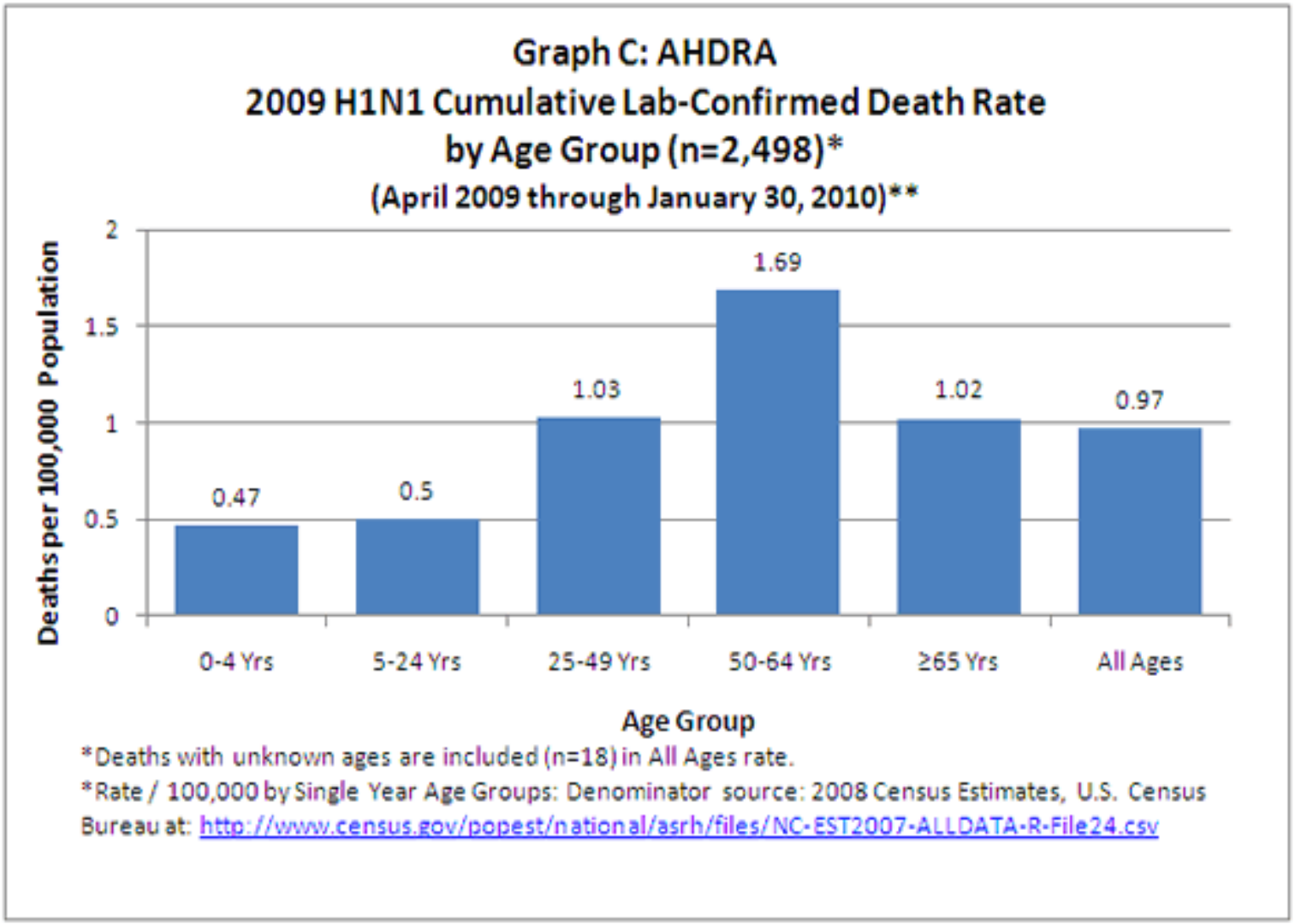
http://www.internationalsos.com/en/

- **US Forces are covered in existing contract.**

Questions?

End

H1N1 Deaths


Graph C: AHDRA
2009 H1N1 Cumulative Lab-Confirmed Death Rate
by Age Group (n=2,498)*
(April 2009 through January 30, 2010)**
Deaths per 100,000 Population
2
1.5
1
0.5
0
0.47
0.5
1.03
1.69
1.02
0.97
0-4 Yrs
5-24 Yrs
25-49 Yrs
50-64 Yrs
≥65 Yrs
All Ages
Age Group
*Deaths with unknown ages are included (n=18) in All Ages rate.
*Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at: http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv

PNG Cholera Outbreak

Planning Goals

- **What are the mitigation strategies for:**
  - **Pre-deployment Phase**
  - **Deployment Phase**
  - **Post Deployment Phase**

Pre- Deployment

- **What is in place to ensure no ill personnel come onboard (Military or NGO) prior to deploying?**
- **What screening is to be completed?**
- **What mitigating factors are to be put into place?**
- **What can be done to ensure no ill personnel infect the remainder of the crew?**
- **How can we ensure we do not have a repeat of last years event?**

Deployment Phase

- **What measures in place to screen crew/NGO's embarking in Hawaii, Guam or other ports?**
- **What mitigating factors will be in place for those personnel embarking on the Ship?**
- **What screening is in place for the patients that will be coming aboard for treatment?**

Post Deployment Phase

- **What is the process for Crew / NGO's that are ill after the mission is completed?**

- **Who will be the central POC to contact all in the event of infectious disease is acquired by one of the crew/NGO's post mission?**